

Data at existing structures should include as much of the following as is available or can be obtained. (Note: Much of this information should be obtained from the District Bridge Office or the District Hydraulic Unit).

1. Date of construction
2. Location relative to proposed structure
3. Cross-section under bridge from as-built plans
4. Present cross-section under bridge
5. Type and size of materials in streambed and banks
6. Condition of structure
7. Scour, erosion and sediment deposits
8. Evidence of head cutting in stream
9. Major flood events since construction and dates of occurrence.
10. Flood elevation upstream and downstream of the bridge with horizontal location of such elevations
11. Observed differences in water surface elevations upstream and downstream of the embankment at as many locations as the information is available
12. Direction of flow relative to piers and the low water channel
13. Observed drift size and quantities
14. Clearance and freeboard
15. Duration of flooding
16. Damage of the high way, bridge and other property
17. The road profile should be carried to a point \pm two feet (**2 ft**) above the high water elevation.
18. Photographs of the structure in flood events, stream, and any other feature that will aid in the design of the bridge

Flood Plain Cross-Sections - A cross-section shall be taken at right angles to the flood flow of the stream at the proposed bridge site and shall extend far enough to cover all the area under high water. And where practical, the stream cross-section shall extend to cover an area at least two feet (**2 ft**) above high water. The stream cross-section shall be plotted in the sUPCb#.dgn to the same scale as the centerline profile. A solid line representing the location of this cross-section shall be drawn on the site plan.

DTM readings or Cross-sections, which can provide a representative description of the flood plain, shall be taken throughout the area covered by the stream traverse. These sections should be located at points of major change in cross-sectional area of the flood plain. Major changes in cross-sectional area can be described as: narrowest point; widest point; points of major change in stream gradient (more than 5% change); the beginning and end of significant bends in the flood plain; points of confluence of two streams and at points that may cause a backwater effect (a dam, a road). As a general guideline, sections should be taken \pm one hundred feet (**100 ft**) upstream and downstream of all structures (proposed and existing), \pm one hundred feet (**100 ft**) and \pm one thousand feet (**1000 ft**) downstream of the proposed roadway centerline, and \pm five hundred feet (**500 ft**) and \pm one thousand feet (**1000 ft**) upstream of the proposed roadway centerline. These cross-sections shall be taken, as nearly as practical, at right angles (90°) to the direction of flood flow. The cross-sections shall be collected left to right, as you are looking downstream. They shall